

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: Unassigned  
Examiner: Unassigned

In Re PATENT APPLICATION Of:

Applicants : Ming-Chung YANG, )  
Wei-Kuan SHIH )  
and Wen-Hsin YANG )  
Serial No. : To Be Assigned )  
Filed : January 29, 2002 )  
For : METHOD FOR QUALITY OF )  
SERVICE CONTROLLABLE )  
REAL-TIME SCHEDULING )  
Attorney Ref. : SUND 256 )

**PRELIMINARY  
AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination on the merits, please amend the application as follows:

**IN THE CLAIMS**

Please amend claims 4, 5, 9-15, 35, 36, and 40-49, as follows:

4. (Amended) An apparatus according to claim 1, wherein the regulator adjusts the number of the tasks inputted to the on-line scheduler according to the first set of parameters.

5. (Amended) An apparatus according to claim 1, wherein the on-line scheduler selects the real-time scheduling method according to the second set of parameters.

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9. (Amended) An apparatus according to claim 1, wherein the evaluator evaluates the scheduling result of the on-line scheduler according an evaluation standard, and the evaluation standard includes a task rejection rate, a task suspend/discard rate, an idle rate, and a slack time.

10. (Amended) An apparatus according to claim 1, wherein the first set of parameters includes a token generation rate.

11. (Amended) An apparatus according to claim 1, wherein the first set of parameters includes a token number.

12. (Amended) An apparatus according to claim 1, wherein the first set of parameters includes a queue length.

13. (Amended) An apparatus according to claim 1, wherein the second set of parameters includes a real-time scheduling selection parameter.

14. (Amended) An apparatus according to claim 1, wherein the second set of parameters includes a substitutable check parameter.

15. (Amended) An apparatus according to claim 1, wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion.

35. (Amended) A method according to claim 32, wherein said step (a) is performed by the regulating unit according to the first set of parameters.

36. (Amended) A method according to claim 32, wherein, in said step (b), the real-time scheduling method is selected according to the second set of parameters..

40. (Amended) A method according to claim 32, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task rejection rate.

41. (Amended) A method according to claim 32, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task suspend/discard rate.

42. (Amended) A method according to claim 32, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes an idle rate.

43. (Amended) A method according to claim 32 , wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a slack time.

44. (Amended) A method according to claim 32, wherein the first set of parameters includes a token generation rate.

45. (Amended) A method according to claim 32, wherein the first set of parameters includes a token number.

46. (Amended) A method according to claim 32, wherein the first set of parameters includes a queue length.

47. (Amended) A method according to claim 32, wherein the second set of parameters includes a real-time scheduling selection parameter.

48. (Amended) A method according to claim 32 , wherein the second set of parameters includes a substitutable check parameter.

49. (Amended) A method according to claim 32, wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion.

Please add new claims 50-76, as follows:

50. An apparatus according to claim 3, wherein the regulator adjusts the number of the tasks inputted to the on-line scheduler according to the first set of parameters.

51. An apparatus according to claim 3, wherein the on-line scheduler selects the real-time scheduling method according to the second set of parameters.

52. An apparatus according to claim 51, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the inputted tasks are executed as soon as possible and the optional portions of the inputted tasks are substitutable (MOS method).

53. An apparatus according to claim 51, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the inputted tasks are executed as soon as possible and the substitutable optional portions of the inputted tasks are postponed (MOP method).

54. An apparatus according to claim 51, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the inputted tasks are executed as soon as possible and the optional portions of the inputted tasks are to be executed fairly (MOF method).

55. An apparatus according to claim 3, wherein the evaluator evaluates the scheduling result of the on-line scheduler according an evaluation standard, and the evaluation standard includes a task rejection rate, a task suspend/discard rate, an idle rate, and a slack time.

56. An apparatus according to claim 3, wherein the first set of parameters includes a token generation rate.

57. An apparatus according to claim 3, wherein the first set of parameters includes a token number.

58. An apparatus according to claim 3, wherein the first set of parameters includes a queue length.

59. An apparatus according to claim 3, wherein the second set of parameters includes a real-time scheduling selection parameter.

60. An apparatus according to claim 3, wherein the second set of parameters includes a substitutable check parameter.

61. An apparatus according to claim 3, wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion.

62. A method according to claim 34, wherein said step (a) is performed by the regulating unit according to the first set of parameters.

63. A method according to claim 34, wherein, in said step (b), the real-time scheduling method is selected according to the second set of parameters.

64. A method according to claim 63, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the input tasks are executed as soon as possible and the optional portions of the inputted tasks are substitutable (MOS method).

65. A method according to claim 63, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the input tasks are executed as soon as possible and the substitutable optional portions of the inputted tasks are postponed (MOP method).

66. A method according to claim 63, wherein the real-time scheduling method is a scheduling method in which the mandatory portions of the input tasks are executed as soon as possible and the optional portions of the inputted tasks are to be executed fairly (MOF method).

67. A method according to claim 63, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task rejection rate.

68. A method according to claim 63, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task suspend/discard rate.

69. A method according to claim 63, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes an idle rate.

70. A method according to claim 63, wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a slack time.

71. A method according to claim 63, wherein the first set of parameters includes a token generation rate.

72. A method according to claim 63, wherein the first set of parameters includes a token number.

73. A method according to claim 63, wherein the first set of parameters includes a queue length.

74. A method according to claim 63, wherein the second set of parameters includes a real-time scheduling selection parameter.

75. A method according to claim 63, wherein the second set of parameters includes a substitutable check parameter.

76. A method according to claim 63, wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion. —

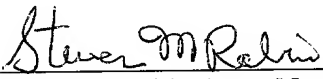
**REMARKS**

Claims 4, 5, 9-15, 35, 36, and 40-49 have been amended, and new claims 50-76 have been added to eliminate multiple dependency from the claims. Please enter the amendments before calculating the filing fee.



Respectfully submitted,

January 29, 2002  
Date

  
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**MARKED-UP CLAIMS**

4. (Amended) An apparatus according to claim 1 [or 3], wherein the regulator adjusts the number of the tasks inputted to the on-line scheduler according to the first set of parameters.

5. (Amended) An apparatus according to claim 1 [or 3], wherein the on-line scheduler selects the real-time scheduling method according to the second set of parameters.

9. (Amended) An apparatus according to claim 1 [or 3], wherein the evaluator evaluates the scheduling result of the on-line scheduler according an evaluation standard, and the evaluation standard includes a task rejection rate, a task suspend/discard rate, an idle rate, and a slack time.

10. (Amended) An apparatus according to claim 1 [or 3], wherein the first set of parameters includes a token generation rate.

11. (Amended) An apparatus according to claim 1 [or 3], wherein the first set of parameters includes a token number.

12. (Amended) An apparatus according to claim 1 [or 3], wherein the first set of parameters includes a queue length.

13. (Amended) An apparatus according to claim 1 [or 3], wherein the second set of parameters includes a real-time scheduling selection parameter.

14. (Amended) An apparatus according to claim 1 [or 3], wherein the second set of parameters includes a substitutable check parameter.

15. (Amended) An apparatus according to claim 1 [or 3], wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion.

35. (Amended) A method according to claim 32 [or 34], wherein said step (a) is performed by the regulating unit according to the first set of parameters.

36. (Amended) A method according to claim 32 [or 34], wherein, in said step (b), the real-time scheduling method is selected according to the second set of parameters..

40. (Amended) A method according to claim 32 [or 34], wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task rejection rate.

41. (Amended) A method according to claim 32 [or 34], wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a task suspend/discard rate.

42. (Amended) A method according to claim 32 [or 34], wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes an idle rate.

43. (Amended) A method according to claim 32 [or 34], wherein, in said step (c), the evaluating unit evaluates the scheduling result according an evaluation standard, and the evaluation standard includes a slack time.

44. (Amended) A method according to claim 32 [or 34], wherein the first set of parameters includes a token generation rate.

45. (Amended) A method according to claim 32 [or 34], wherein the first set of parameters includes a token number.

46. (Amended) A method according to claim 32 [or 34], wherein the first set of parameters includes a queue length.

47. (Amended) A method according to claim 32 [or 34], wherein the second set of parameters includes a real-time scheduling selection parameter.

48. (Amended) A method according to claim 32 [or 34], wherein the second set of parameters includes a substitutable check parameter.

49. (Amended) A method according to claim 32 [or 34], wherein the second set of parameters includes a parameter indicative of a maximum allowable execution proportion of the optional portion.

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